

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1089	((vortex adj tube)  ranque hilsch) pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/07 14:55
L2	555	((vortex adj tube)  ranque hilsch) pressure (housing chamber container) temperature	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/07 14:55
S5	1	("4287957").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/31 14:14
S6	2	("2861780").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/31 10:55
S8	276	62/5	US-PGPUB; USPAT	AND	ON	2006/08/03 15:25
S9	131224	compressor	US-PGPUB; USPAT	AND	ON	2006/08/01 12:34
S10	132	S8 S9	US-PGPUB; USPAT	AND	ON	2006/08/01 12:34
S11	276	62/5	US-PGPUB; USPAT	AND	ON	2006/08/01 13:48
S12	1	("4714484").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/08/01 16:12
S13	16	((("6424533") or ("5547028") or ("5931000") or ("5730217") or ("5720342") or ("4513352") or ("4722026") or ("4400858") or ("6341498") or ("6401463") or ("4339926") or ("3208229") or ("1952281") or ("6672093"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/08/03 14:45
S14	19	((("6424533") or ("5547028") or ("5931000") or ("5730217") or ("5720342") or ("4513352") or ("4722026") or ("4400858") or ("6341498") or ("4287957") or ("2861780") or ("6401463") or ("4339926") or ("3208229") or ("1952281") or ("6672093"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/08/03 14:38
S15	33764	vortex	US-PGPUB; USPAT	AND	ON	2006/08/03 14:38
S16	1878419	pressure	US-PGPUB; USPAT	AND	ON	2006/08/03 14:39

## EAST Search History

S17	1560516	vessel   tank   container   chamber	US-PGPUB; USPAT	AND	ON	2006/08/04 11:33
S18	981347	tube	US-PGPUB; USPAT	AND	ON	2006/08/03 14:39
S19	131362	compressor	US-PGPUB; USPAT	AND	ON	2006/08/03 14:39
S21	1415	S15 near S18	US-PGPUB; USPAT	AND	ON	2006/08/03 14:46
S23	791	S21 S16 S17	US-PGPUB; USPAT	AND	ON	2006/08/03 14:47
S24	264	high near S16 S21 S16 S17	US-PGPUB; USPAT	AND	ON	2006/08/03 14:47
S25	136018	low near3 S16 high near3 S16	US-PGPUB; USPAT	AND	ON	2006/08/03 14:48
S27	191	S21 S25	US-PGPUB; USPAT	AND	ON	2006/08/03 15:19
S28	939143	cooling   cold	US-PGPUB; USPAT	AND	ON	2006/08/03 15:20
S29	140	S27 S28	US-PGPUB; USPAT	AND	ON	2006/08/03 15:20
S30	1395921	air	US-PGPUB; USPAT	AND	ON	2006/08/03 15:20
S31	127	S29 S30	US-PGPUB; USPAT	AND	ON	2006/08/03 15:24
S32	958693	S16 S17	US-PGPUB; USPAT	AND	ON	2006/08/03 15:24
S33	276	62/5	US-PGPUB; USPAT	AND	ON	2006/08/03 15:25
S35	299216	S16 near3 S17	US-PGPUB; USPAT	AND	ON	2006/08/03 15:26
S37	85	S33 S35	US-PGPUB; USPAT	AND	ON	2006/08/03 15:27
S39	276	62/5	US-PGPUB; USPAT	AND	ON	2006/08/04 10:28
S43	5135	dewar	US-PGPUB; USPAT	AND	ON	2006/08/04 10:30
S44	186290	flask	US-PGPUB; USPAT	AND	ON	2006/08/04 10:30
S46	17609	vortex tube	US-PGPUB; USPAT	AND	ON	2006/08/04 10:34
S47	3889	S46 S44	US-PGPUB; USPAT	AND	ON	2006/08/04 10:34
S48	2	S39 S47	US-PGPUB; USPAT	AND	ON	2006/08/04 11:11

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S54	17609	vortex tube	US-PGPUB; USPAT	AND	ON	2006/08/04 11:33
S55	131362	compressor	US-PGPUB; USPAT	AND	ON	2006/08/04 11:33
S56	1498	S54 S55	US-PGPUB; USPAT	AND	ON	2006/08/04 11:33
S57	1560516	vessel   tank   container   chamber	US-PGPUB; USPAT	AND	ON	2006/08/04 11:33
S58	1302	S57 S56	US-PGPUB; USPAT	AND	ON	2006/08/04 11:34
S59	3307016	underground   downhole   subsurface   mine   well   bore	US-PGPUB; USPAT	AND	ON	2006/08/04 11:35
S60	1106	S58 S59	US-PGPUB; USPAT	AND	ON	2006/08/04 11:37
S61	276	62/5	US-PGPUB; USPAT	AND	ON	2006/08/04 11:37
S62	37	S61 S60	US-PGPUB; USPAT	AND	ON	2006/08/04 11:37
S64	1395921	air	US-PGPUB; USPAT	AND	ON	2006/08/04 11:38
S65	35	S62 S64	US-PGPUB; USPAT	AND	ON	2006/08/04 11:38
S66	276	62/5	US-PGPUB; USPAT	AND	ON	2006/08/04 13:57
S71	5	mathiszik.in.	US-PGPUB; USPAT	AND	ON	2006/08/08 14:59
S77	1987	((vortex adj tube)  ranque	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/06 17:32
S78	429	((vortex adj tube)  ranque) compressor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/06 17:28
S79	317	((vortex adj tube)  ranque) compressor pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/06 17:27
S80	510	((vortex adj tube)  ranque) stor\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/06 17:27

## EAST Search History

S81	311	((vortex adj tube)  ranque) stor\$3 pressure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/06 17:27
S82	275	((vortex adj tube)  ranque) compressor pressure temperature	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/06 17:27
S83	34	("1952281"   "2698525"   "2920457"   "2943452"   "3173273"   "3208029"   "3327495"   "3581509"   "3630040"   "3654768"   "3899684"   "3922871"   "4240261"   "4333017"   "4407134"   "4594084"   "4914752"   "5010736"   "5331817"   "5542413"   "5685475"   "5901572"   "6033517").PN. OR ("6401463").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/06/06 17:30
S84	2017	((vortex adj tube)  ranque hilsch)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/07 14:54
S85	436	((vortex adj tube)  ranque hilsch) compressor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/06 18:03
S86	7	((vortex adj tube)  ranque hilsch) compressor) not S78	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/06 17:33
S87	13	("1952281"   "3173273"   "3208229"   "3654768"   "4026120"   "4257794"). PN. OR ("4333017").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/06/06 17:56
S88	18	("1610288"   "3285701"   "3555787"   "3889484"   "3899684"   "3942330"). PN. OR ("4407134").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2007/06/06 18:00
S89	1	"10/709,615"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2007/06/07 12:47